

Rapid Sampling Using 3M Membrane Technology (TechID 1514)

This technology incorporates specialized flow-through membranes into a rapid water sampling system for radionuclides, heavy metals, and other constituents in natural and process waters. The sampling system is field-portable, rugged, and user-friendly.



Developer:

- 3M Company

Applications:

- Selective capture of target analytes (radionuclides, heavy metals, and other constituents) from groundwater and other waters, for use in site characterization and monitoring

Benefits:

- Rapid field deployment with user-friendly systems
- Analysis turnaround reduced from weeks to days or hours with on-site analysis (minutes with self-indicating membranes under development)
- Reduction of analytical waste because of elimination of large-volume water samples

Status:

- Demonstrated at Savannah River Site (FY 95, 96, 97, 98), West Valley (FY 97), Paducah (FY 97), GE Morris, IL (FY 97), and Ashtabula, OH (FY 97)
- Deployed at SRS F/H groundwater remediation facilities in FY 97
- Self-indicating disks under development
- Empore™ membrane disks for SR, CS, Ra, and Pb are commercially available from 3M Inc., St. Paul, MN
- Empore™ membrane disks for uranium and plutonium are being developed
- Innovative Technology Summary Report Available (www.cmst.org)